ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Revision of the Commission's rules to ensure compatibility with Enhanced 911 emergency calling systems	)	CC Docket No.94-102
	)	RM-8143
	)	

COMMENTS OF CMT PARTNERS

Adam A. Andersen
Senior Counsel
CMT Partners
651 Gateway Boulevard, 15th Fl.
South San Francisco, CA 94080
(415) 871-9500

Thomas Gutierrez
Lukas, McGowan, Nace & Gutierrez, Chartered
Suite 1200
1111 Nineteenth Street, N.W.
Washington, D.C. 20036
(202) 857-3500

January 9, 1995

TABLE OF CONTENTS

SUMMARY

By these comments, CMT Partners ("CMT") addresses Commission proposals intended to provide for compatibility of wireless services with E 911. CMT applauds the Commission for proposing to facilitate the provision of E 911 to mobile users. CMT also proposes the modification of certain proposed rule changes in order to provide for more efficient delivery of E 911 services.

CMT supports the Commission's proposals regarding availability of E 911, E 911 call priority and re-ring call back capability. CMT also supports the Commission's proposal to establish standards bodies to assess grade-of-service requirements. In addition, CMT urges the Commission to rely on standards bodies before finalizing proposals regarding user location, common channel signaling, access to TTY services, and equipment manufacturer--importation and labeling. Finally, CMT urges the Commission that any established E 911 rules be structured so as to prevent carriers who attempt to comply with all such requirements from being assessed liability in the event of caller location errors, and to preempt state rules and regulations that conflict with federal rules and policies.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Revision of the Commission's rules to ensure compatibility with Enhanced 911 emergency calling systems	)	CC Docket No. 94-102
	)	RM-8143
	)	

COMMENTS OF CMT PARTNERS

CMT Partners ("CMT"),[1/] by its attorney and pursuant to Section 1.415 of the Commission's rules, respectfully submits its comments in response to the Notice of Proposed Rulemaking in the captioned proceeding.[2/]

I. Introduction

By these comments, CMT Partners focuses on one of the two distinct issues addressed in the Notice: Compatibility of Wireless Services with Enhanced 911 Services ("E 911").[3/] At the outset, CMT applauds the Commission for proposing rules to facilitate the provision of E 911 to mobile users. Yet, for the reasons set forth below, CMT submits that modification of certain of the rule changes

---

1/ CMT is the parent corporation for four Commission licensees: Bay Area Cellular Telephone Company, Napa Cellular Telephone Company, Cagal Cellular Communications Corporation and Salinas Cellular Telephone Company. Collectively, these entities provide Band A cellular service in the San Francisco, San Jose, Salinas and Santa Rosa, California and Kansas City, Missouri Metropolitan Statistical Areas.

2/ Notice of Proposed Rule Making, CC Docket No. 94-102, 59 Fed. Reg. 54878 (Nov. 2, 1994) ("Notice").

3/ CMT takes no position on the other issue addressed in the Notice: Compatibility of PBX equipment with 911 systems.

as proposed in the Notice is needed in order to avoid unnecessary and, to an extent, immeasurable complications to cellular carriers. Accordingly, by these comments CMT endorses many of the core components of the Commission's proposal, advises the Commission of certain complications associated with other components, and suggests certain modifications that will further strengthen the Commission's proposal.

II. Discussion

In the Notice, the Commission presents proposals, and invites comments, regarding eight distinct issues involving the provision of E 911 services over wireless systems. Both the Commission's proposal, and CMT's comments regarding such proposals are discussed ad seriatim below.

A. 911 Availability

In its Notice, the Commission proposed that, within one year of the effective date of the proposed rules, wireless users must have an ability to reach emergency services both while in a home service area and in a subscribed-to roamed service area by dialing only 911. Notice, at para. 41. Under such an arrangement, a user must be allowed to make an E 911 call without user validation. The Commission invited inquiry with respect to the extent to which mobile radio services provide such capabilities today and whether such features would require hardware changes to the mobile equipment or the base station.

CMT supports the Commission's proposal to permit both home service area and subscribed-to roam service area subscribers to be

able to place E 911 calls without the need for user validation. CMT currently provides this service, and has been able to do so without the need for any significant system modifications.

B. Grade of Service

The Commission observed that standards bodies should investigate technical solutions and other strategies to ensure minimal blocking of E 911 calls from mobile transmitters. Notice, at para 42. The Commission also voiced its initial view that federal standards are not warranted at this time, and sought comment on all of these assessments. Id.

CMT agrees with the Commission's belief that standards bodies should study how best to minimize blocking of wireless E 911 calls. CMT also agrees with the Commission's tentative conclusion that there is no need for federal standards at this time.

C. E 911 Call Priority

The Commission proposed that, one year after the effective date of the new rules, originating wireless E 911 calls must be assigned priority[4/] over non-emergency calls. Notice, at para. 44. But the Commission affirmatively stopped short of requiring the interruption of calls in process. Id. The Commission sought comments on the wisdom of its proposal, whether the ability to interrupt calls in progress would require major equipment modifications, and whether existing systems have this capability.

4/ This priority would be assigned at the handset and would extend to placing the E 911 call at the beginning of any queue for calls waiting to be placed.

CMT supports wholeheartedly the Commission's proposal that, commencing one year after the effective date of the new rules, E 911 wireless calls be given priority over non-emergency calls. CMT also supports the Commission's position that the above priority not extend to require the interruption of calls in progress. As the Commission properly observed, requiring interruption of calls in progress carries considerable risks in view of the fact that it is impossible to know the nature and importance of the calls that would be interrupted. Moreover, CMT submits that cellular systems are not currently designed with a capability to interrupt only selected calls in progress, and the acquisition of such capabilities may well necessitate significant, and possibly even "major" equipment modifications.

D. User Location Information

In its Notice, the Commission agreed that a wireless system should have the ability to identify the location of a wireless terminal used to make a E 911 call. Notice at para. 45.[5/] The Commission also acknowledged that in order to obtain precise geographic location information a Public Safety Answering Point ("PSAP") would need to know not only the latitude and longitude of a mobile unit, but also its elevation in the event the caller is located in a high-rise facility. Id. The Commission sought comment on specific technical and cost considerations effecting the

---

5/ In making such a determination, the Commission acknowledged that Automatic Location Identification ("ALI") is more easily accomplished within a wire system.

implementation of an ALI service for enhanced service to wireless customers that would include detailed location information, and the Commission recognized that there are several possible methods available to provide location data with varying levels of precision. All of the proposed methods raise issues regarding performance, costs and technical feasibility.[6/]

Due to the concerns about technical and financial feasibility, the Commission tentatively concluded that compliance with ALI requirements should be implemented in three steps. In step one, which would have to be implemented within one year, wireless service providers would be required to have the capability to identify the base station or cell site receiving a E 911 call and, if the base station or cell deploys sectorized antenna, an ability to specify the particular sector that received the call. Under step two, which would be implemented within three years, the associated base station would have to be capable of relaying more precise information. Specifically, the ALI information made available must include an estimate of the approximate location and the distance of the mobile unit from the receiving base station,

---

6/ Among the methods available noted by the Commission are global positioning satellites ("GPS") time delay measurements; received signal strengths; ranging and triangulation; received single angle of arrival; CDMA time synchronization; commercial FM multi-lateration; LORAN reception; automatic vehicle monitoring; and cell site/radio ports sectorization. As an example, the complications associated with each of these techniques, the Commission noted that GPS does not work well if a caller is inside a building or amid obstructions that attenuate or block satellite radio signals, and terrestrial radio triangulation methods are also hampered by interference and signal reflection.

calculated on a basis of signal strength or some other method.[7/] In step three, the Commission proposed that, after five years, a mobile station would be required to be located in a three-dimensional environment within a radius of no more than 125 meters.[8/] The Commission invited comment with respect to whether more precise locations would be economically and technically feasible.

CMT endorses the Commission's proposal with respect to step one. Most cellular systems either currently have, or can readily obtain, an ability to comply with one part of the step one requirement to identify the cell, and where applicable the sector, from which calls emanate. Although most systems have an ability to locate a caller, questions currently exist as to how that location information can be efficiently and reliably transmitted to PSAPs. The one-year transition period proposed by the Commission for implementation of this requirement should be sufficient to permit the industry to obtain the additional necessary capability.

7/ In so proposing, the Commission specifically sought analysis of technical and cost considerations involved with such implementation.

8/ Although the text of the Commission's Notice did not explain how the 125-meter criterion was established, it appears that it stems from a "Survey of Location Technologies to Support Mobile 9-1-1" conducted by CJ Driskal and Associates. That report is incorporated in the Commission's record in this proceeding, referenced in para. 47 of the Notice, and estimates that "location precision varies between about 15 and 125 meters, with most in the 30-60 unit range". Notice at para. 47.

Similarly, cellular systems currently have, or can readily obtain, an ability to estimate called signal strength. There is, however, a meaningful difference between being able to estimate signal strength and being able to estimate the approximate location of a mobile unit from a receiving base station calculated on the basis of received signal strength. Accordingly, there will be certain additional cost and technical complications involved in implementing step two. CMT proposes that, within the proposed three-year transition period, industry standards bodies be established to assess and facilitate compliance with the proposed step two obligations, and the Commission should defer implementing step two requirements pending the results of such analysis.

The step three proposal, having a five-year transition period, is far more complicated. At this point, the requirement strays from capabilities that cellular carriers possess, or need to possess for purposes other than perfecting E 911 call delivery. As a result, step three has potential to add cost considerable that otherwise would not be engendered by carriers. Moreover, as the Commission noted in its discussion (see Notice at para. 46), the technologies available to provide step three type of data are immature, and none appears to be without significant problems. In view of this, CMT urges the Commission to establish an industry advisory board to facilitate implementation of the type of capabilities included in the Commission's step three proposal, and to defer establishment of any step three requirements pending the results of technical and financial analysis surrounding this

proposal.[9/] Among other things, the advisory board should be empowered to play a critical role in terms of facilitating the transition from steps one and two to step three.

E. Re-Ring Call Back

The Commission requested comment on the technical and economic feasibility of wireless services to provide the capability to return calls placed from mobile radio transmitters to an E 911 caller immediately, and proposed that such requirement be implemented within three years of the effective date of the proposed rules.

CMT supports the Commission's proposal to require such capability. With minor adjustments, such capability currently exists in many cellular systems and others can implement it within a three-year period.

F. Common Channel Signaling

The Commission reported that a joint paper has concluded that radio transmissions of E 911 calls eventually should be capable of providing the same or similar information and features that are now available from wireless E 911 calls.[10/] In that vein, the

---

9/ Even while urging for the creation of an industry advisory board, CMT applauds the Commission's determination to define requirements in terms of capabilities rather than technologies used to achieve those capabilities. Notwithstanding this results-oriented approach, CMT submits that an advisory board is both appropriate and necessary in order to assure the most efficient use of capabilities and technologies to provide the location data at issue in step three.

10/ See para. 53 of the Notice where such capabilities are specified.

Commission sought comment on whether the reliability of E 911 technologies would be hampered if E 911 services were transferred to a common channel signaling, and posed specific inquiry with respect to how key E 911 features would effect the survivability of E 911 SS7 base calls during a common channel signaling outage.

CMT submits that this proposal would also be most appropriate for consideration by an industry advisory board, and urges the Commission to defer implementing this proposal pending completion of analysis by the industry board.

G. Access to TTY Services

In its Notice, at para. 54, the Commission proposed, within one year of the effective date of the adoption of the new rules, that radio services must be capable of permitting access by individuals with speech or hearing disabilities through means other than mobile radio handsets. The Commission's inclusion of this proposal in the subject proceeding appears to stem from the Commission's belief that, to the extent radio services are accessible to TTY services today, those services will be able to provide access to E 911 service.

CMT supports the Commission's urging that TTY services be available to assist the hearing impaired. At the same time, CMT submits that the industry advisory board proposed earlier in these comments should, as one of its tasks, determine and establish standards to permit interface between TTY equipment and wireless systems.

H. Equipment Manufacturer--Importation and Labeling

The Commission raised general inquiry with respect to whether it would be necessary to establish specific requirements for base and mobile transmitters to ensure compliance with the objectives of this proceeding, and particularly with respect to ANI and ALI. Notice at para. 55. In particular, comment was requested as to whether it may be appropriate, within 30 days of the effective date of the rules proposed in this proceeding, to require equipment that does not meet the proposed requirements to be labeled with a particular statement explaining the limits of the E 911 service available through the subject wireless system.

CMT submits that there are many different ways in which customers can be educated as to any limitations associated with an E 911 system, and that the most appropriate way to advise the public of any limitations of E 911 service would be through inserts and billing information, rather than labeling on customer premises equipment. Accordingly, CMT urges the Commission to provide licensees with additional flexibility with respect to how users should be advised of limitations associated with E 911, or to create a standards body that will address this issue.

I. Additional Considerations

CMT urges the Commission to recognize the several legitimate concerns of carriers as it moves forward to implement rules to facilitate the provision of E 911 over wireless systems. First among these is a need to assure that carriers who strive to provide E 911 capabilities to its customer base are not put at risk in the

event that such capabilities ultimately prove to be ineffective or present erroneous information to the PSAP, and thus undermine E 911 location efforts. For example, the Commission should recognize that during the course of business particular calls may be incorrectly associated with a given cell, or that there may be errors in the signal strength readings used to determine the location of a particular customer. CMT submits that so long as the carrier at issue has utilized reasonable diligence in designing its system, it should be provided blanket exception to liability associated with an incorrect read on its part.

CMT also submits that the federal government should preempt state regulation over this same subject matter. As the Commission properly noted, the Commission has authority to preempt state regulation in instances, such as this, where it is impossible to separate the interstate and intrastate components of service, or when there is a potential that state regulation may conflict with federal proposed rules and thereby impede a legitimate federal policy.[11/]

III. Conclusion

11/ See, e.g., Louisiana Public Service Commission v. FCC, 476 U.S. 355, 375 n.4 (1986); Illinois Bell Tel. Co. v. FCC, 833 F.2d 104 (D.C. Cir. 1989); California v. FCC, 905 F.2d 1217 (9th Cir. 1990); Texas Public Utility Commission v. FCC, 886 F.2d 1325 (D.C. Cir. 1989); North Carolina Utilities Commission v. FCC, 552 F.2d 1036 (4th Cir.), cert. denied, 434 U.S. 874 (1977); North Carolina Utilities Commission v. FCC, 537 F.2d 787 (4th Cir.), cert. denied, 429 U.S. 1027 (1976). See also CMRS Order, 9 FCC Rcd at 1506 and n.515.

event that such capabilities ultimately prove to be ineffective or present erroneous information to the PSAP, and thus undermine E 911 location efforts. For example, the Commission should recognize that during the course of business particular calls may be incorrectly associated with a given cell, or that there may be errors in the signal strength readings used to determine the location of a particular customer. CMT submits that so long as the carrier at issue has utilized reasonable diligence in designing its system, it should be provided blanket exception to liability associated with an incorrect read on its part.

CMT also submits that the federal government should preempt state regulation over this same subject matter. As the Commission properly noted, the Commission has authority to preempt state regulation in instances, such as this, where it is impossible to separate the interstate and intrastate components of service, or when there is a potential that state regulation may conflict with federal proposed rules and thereby impede a legitimate federal policy.[11/]

11/ See, e.g., Louisiana Public Service Commission v. FCC, 476 U.S. 355, 375 n.4 (1986); Illinois Bell Tel. Co. v. FCC, 833 F.2d 104 (D.C. Cir. 1989); California v. FCC, 905 F.2d 1217 (9th Cir. 1990); Texas Public Utility Commission v. FCC, 886 F.2d 1325 (D.C. Cir. 1989); North Carolina Utilities Commission v. FCC, 552 F.2d 1036 (4th Cir.), cert. denied, 434 U.S. 874 (1977); North Carolina Utilities Commission v. FCC, 537 F.2d 787 (4th Cir.), cert. denied, 429 U.S. 1027 (1976). See also CMRS Order, 9 FCC Rcd at 1506 and n.515.

III. Conclusion

In its Notice, the Commission has set forth a number of proposals which, collectively, should go a long way towards facilitating the provision of E 911 to wireless callers. CMT endorses the Commission's proposals generally. It also urges certain modifications of the proposals in order to create a more efficient E 911 service that would further public interest. Specifically, CMT urges the Commission to establish industry advisory boards to facilitate transition associated with several Commission proposals and to provide input with respect to the propriety and timing of other proposals. Accordingly, CMT urges the Commission to adopt its proposals as modified herein.

Respectfully submitted,

CMT PARTNERS

By: _____ By: _____

Adam A. Andersen
Senior Counsel
CMT Partners
651 Gateway Boulevard, 15th Fl.
South San Francisco, CA 94080
(415) 871-9500

Thomas Gutierrez
Lukas, McGowan, Nace & Gutierrez, Chartered
Suite 1200
1111 Nineteenth Street, N.W.
Washington, D.C. 20036
(202) 857-3500

January 9, 1995